

of ethylene polymer compounds, carbon monoxide-bonded copolymers, micronized polyethylene waxes, petroleum derived waxes, ethylene-bis-stearamide, N,N-ethylene-bis-stearamide, tars, high molecular weight oils, high molecular weight hydrocarbons, polyvinyl alcohols, oxidized polyethylene homopolymers, unoxidized polyethylene homopolymers, carnauba wax, aluminum hydroxide, calcium hydroxide, potassium hydroxide, lithium hydroxide, boric acid, paraldehyde, paraformaldehyde, trioxane, lithium formate, lithium acetate, lithium carbonate, calcium carbonate, silicon carbonate, magnesium carbonate, sodium bicarbonate, salts of acetic acid, salts of formic acid, salts of boric acid, lithium chloride trihydrate, lithium nitrate trihydrate, sodium carbonate decahydrate, sodium borate decahydrate, hydrated epsom salts, magnesium nitrate hexahydrate, beryllium sulfate tetrahydrate, sodium phosphate dodecahydrate, calcium chloride hexahydrate, zinc sulfate heptahydrate, magnesium chloride hexahydrate, sodium sulfate decahydrate, aluminum oxide trihydrate, aluminum sulfate decahydrate, aluminum fluoride trihydrate, aluminum nitrate nonhydrate and any eutectic blends of any of these materials [or families of materials] including salts with melting points below 550 degrees Celsius.

10. (Amended) The flexible thermal control composite of claim 2, wherein said endothermic agent is selected from the group consisting of oxidized polymers, unoxidized polymers, oxidized homopolymers of ethylene polymer compounds, unoxidized homopolymers of ethylene polymer compounds, carbon monoxide-bonded copolymers, micronized polyethylene waxes, petroleum derived waxes, ethylene-bis-stearamide, N,N-ethylene-bis-stearamide, tars, high molecular weight oils, high molecular weight hydrocarbons, polyvinyl alcohols, oxidized polyethylene homopolymers, unoxidized polyethylene homopolymers, carnauba wax, aluminum hydroxide, calcium hydroxide, potassium hydroxide, lithium hydroxide, boric acid, paraldehyde, paraformaldehyde, trioxane, lithium formate, lithium acetate, lithium carbonate, calcium carbonate, silicon carbonate, magnesium carbonate, sodium bicarbonate, salts of acetic acid, salts

of formic acid, salts of boric acid, lithium chloride trihydrate, lithium nitrate trihydrate, sodium carbonate decahydrate, sodium borate decahydrate, hydrated epsom salts, magnesium nitrate hexahydrate, beryllium sulfate tetrahydrate, sodium phosphate dodecahydrate, calcium chloride hexahydrate, zinc sulfate heptahydrate, magnesium chloride hexahydrate, sodium sulfate decahydrate, aluminum oxide trihydrate, aluminum sulfate decaoctahydrate, aluminum fluoride trihydrate, aluminum nitrate nonhydrate and any eutectic blends of any of these materials [or families of materials] including salts with melting points below 550 degrees Celsius.

11.(Amended) The flexible thermal control composite of claim 5, wherein said micronized endothermic agent is selected from the group consisting of micronized oxidized polymers, unoxidized polymers, oxidized homopolymers of ethylene polymer compounds, unoxidized homopolymers of ethylene polymer compounds, carbon monoxide-bonded copolymers, micronized polyethylene waxes, petroleum derived waxes, ethylene-bis-stearamide, N,N-ethylene-bis-stearamide, tars, high molecular weight oils, high molecular weight hydrocarbons, polyvinyl alcohols, oxidized polyethylene homopolymers, unoxidized polyethylene homopolymers, carnauba wax, aluminum hydroxide, calcium hydroxide, potassium hydroxide, lithium hydroxide, boric acid, paraldehyde, paraformaldehyde, trioxane, lithium formate, lithium acetate, lithium carbonate, calcium carbonate, silicon carbonate, magnesium carbonate, sodium bicarbonate, salts of acetic acid, salts of formic acid, salts of boric acid, lithium chloride trihydrate, lithium nitrate trihydrate, sodium carbonate decahydrate, sodium borate decahydrate, hydrated epsom salts, magnesium nitrate hexahydrate, beryllium sulfate tetrahydrate, sodium phosphate dodecahydrate, calcium chloride hexahydrate, zinc sulfate heptahydrate, magnesium chloride hexahydrate, sodium sulfate decahydrate, aluminum oxide trihydrate, aluminum sulfate decaoctahydrate, aluminum fluoride trihydrate, aluminum nitrate

nonhydrate and any eutectic blends of any of these materials [or families of materials] including salts with melting points below 550 degrees Celsius.

12. (Amended) The flexible thermal control composite of claim 6, wherein said micronized endothermic agent is selected from the group consisting of micronized oxidized polymers, unoxidized polymers, oxidized homopolymers of ethylene polymer compounds, unoxidized homopolymers of ethylene polymer compounds, carbon monoxide-bonded copolymers, micronized polyethylene waxes, petroleum derived waxes, ethylene-bis-stearamide, N,N-ethylene-bis-stearamide, tars, high molecular weight oils, high molecular weight hydrocarbons, polyvinyl alcohols, oxidized polyethylene homopolymers, unoxidized polyethylene homopolymers, carnauba wax, aluminum hydroxide, calcium hydroxide, potassium hydroxide, lithium hydroxide, boric acid, paraldehyde, paraformaldehyde, trioxane, lithium formate, lithium acetate, lithium carbonate, calcium carbonate, silicon carbonate, magnesium carbonate, sodium bicarbonate, salts of acetic acid, salts of formic acid, salts of boric acid, lithium chloride trihydrate, lithium nitrate trihydrate, sodium carbonate decahydrate, sodium borate decahydrate, hydrated epsom salts, magnesium nitrate hexahydrate, beryllium sulfate tetrahydrate, sodium phosphate dodecahydrate, calcium chloride hexahydrate, zinc sulfate heptahydrate, magnesium chloride hexahydrate, sodium sulfate decahydrate, aluminum oxide trihydrate, aluminum sulfate decahydrate, aluminum fluoride trihydrate, aluminum nitrate nonhydrate and any eutectic blends of any of these materials [or families of materials] including salts with melting points below 550 degrees Celsius.

13. (Amended) The thermal control composite of claim 3, wherein said recyclable endothermic agent is selected from the group consisting of oxidized polymers, unoxidized polymers, oxidized homopolymers of ethylene polymer compounds, unoxidized homopolymers

of ethylene polymer compounds, carbon monoxide-bonded copolymers, micronized polyethylene waxes, petroleum derived waxes, ethylene-bis-stearamide, N,N-ethylene-bis-stearamide, tars, high molecular weight oils, high molecular weight hydrocarbons, polyvinyl alcohols, oxidized polyethylene homopolymers, unoxidized polyethylene homopolymers, carnauba wax, glycerin, glycol, and glycerin/glycol hydrated salts and any eutectic blends of any of these materials [or families of materials] including salts with melting points below 550 degrees Celsius.

14. (Amended) The thermal control composite of claim 4, wherein said recyclable endothermic agent is selected from the group consisting of oxidized polymers, unoxidized polymers, oxidized homopolymers of ethylene polymer compounds, unoxidized homopolymers of ethylene polymer compounds, carbon monoxide-bonded copolymers, micronized polyethylene waxes, petroleum derived waxes, ethylene-bis-stearamide, N,N-ethylene-bis-stearamide, tars, high molecular weight oils, high molecular weight hydrocarbons, polyvinyl alcohols, oxidized polyethylene homopolymers, unoxidized polyethylene homopolymers, carnauba wax, glycerin, glycol, and glycerin/glycol hydrated salts and any eutectic blends of any of these materials [or families of materials] including salts with melting points below 550 degrees Celsius.

15. (Amended) The thermal control composite of claim 7, wherein said recyclable, micronized, endothermic agent is selected from the group consisting of oxidized polymers, unoxidized polymers, oxidized homopolymers of ethylene polymer compounds, unoxidized homopolymers of ethylene polymer compounds, carbon monoxide-bonded copolymers, micronized polyethylene waxes, petroleum derived waxes, ethylene-bis-stearamide, N,N-ethylene-bis-stearamide, tars, high molecular weight oils, high molecular weight hydrocarbons, polyvinyl alcohols, oxidized polyethylene homopolymers, unoxidized polyethylene homopolymers, carnauba wax, glycerin, glycol, and glycerin/glycol hydrated salts and any

eutectic blends of any of these materials [or families of materials] including salts with melting points below 550 degrees Celsius.

16. (Amended) The thermal control composite of claim 8, wherein said recyclable, micronized endothermic agent is selected from the group consisting of oxidized polymers, unoxidized polymers, oxidized homopolymers of ethylene polymer compounds, unoxidized homopolymers of ethylene polymer compounds, carbon monoxide-bonded copolymers, micronized polyethylene waxes, petroleum derived waxes, ethylene-bis-stearamide, N,N-ethylene-bis-stearamide, tars, high molecular weight oils, high molecular weight hydrocarbons, polyvinyl alcohols, oxidized polyethylene homopolymers, unoxidized polyethylene homopolymers, carnauba wax, glycerin, glycol, and glycerin/glycol hydrated salts and any eutectic blends of any of these materials [or families of materials] including salts with melting points below 550 degrees Celsius.

41. (Amended) The flexible thermal control composite of claim 1, wherein said polymer is selected from the group of polymers consisting of latexes, fluoropolymers, expanded fluoropolymers, fluoroelastomers, elastomers polyimides, polyesters, high density polymers, polyamides, polyarylates, polyetherimides, polyketones, polyphenylene oxides, polyphenylene sulfides, polyphenylsulfones, polysulfones, acetals, nylons, ABS, polyetheretherketones, phenolics, polystyrenes, polycarbonates, polyethylenes, polypropylenes, acrylics, polyurethanes, polyvinyls, polyvinylchlorides, [polymeric, plastic materials well known to those skilled in the art of thermoprotective materials] and the mixtures thereof.

42. (Amended) The flexible thermal control composite of claim 2, wherein said polymer is selected from the group of polymers consisting of latexes, fluoropolymers, expanded

fluoropolymers, fluoroelastomers, elastomers polyimides, polyesters, high density polymers, polyamides, polyarylates, polyetherimides, polyketones, polyphenylene oxides, polyphenylene sulfides, polyphenylsulfones, polysulfones, acetals, nylons, ABS, polyetheretherketones, phenolics, polystyrenes, polycarbonates, polyethylenes, polypropylenes, acrylics, polyurethanes, polyvinyls, polyvinylchlorides, [polymeric, plastic materials well known to those skilled in the art of thermoprotective materials] and the mixtures thereof.

43. (Amended) The flexible thermal control composite of claim 3, wherein said polymer is selected from the group of polymers consisting of latexes, fluoropolymers, expanded fluoropolymers, fluoroelastomers, elastomers polyimides, polyesters, high density polymers, polyamides, polyarylates, polyetherimides, polyketones, polyphenylene oxides, polyphenylene sulfides, polyphenylsulfones, polysulfones, acetals, nylons, ABS, polyetheretherketones, phenolics, polystyrenes, polycarbonates, polyethylenes, polypropylenes, acrylics, polyurethanes, polyvinyls, polyvinylchlorides, [polymeric, plastic materials well known to those skilled in the art of thermoprotective materials] and the mixtures thereof.

44. (Amended) The flexible thermal control composite of claim 4, wherein said polymer is selected from the group of polymers consisting of latexes, fluoropolymers, expanded fluoropolymers, fluoroelastomers, elastomers polyimides, polyesters, high density polymers, polyamides, polyarylates, polyetherimides, polyketones, polyphenylene oxides, polyphenylene sulfides, polyphenylsulfones, polysulfones, acetals, nylons, ABS, polyetheretherketones, phenolics, polystyrenes, polycarbonates, polyethylenes, polypropylenes, acrylics, polyurethanes, polyvinyls, polyvinylchlorides, [polymeric, plastic materials well known to those skilled in the art of thermoprotective materials] and the mixtures thereof.

45. (Amended) The flexible thermal control composite of claim 5, wherein said polymer is selected from the group of polymers consisting of latexes, fluoropolymers, expanded fluoropolymers, fluoroelastomers, elastomers polyimides, polyesters, high density polymers, polyamides, polyarylates, polyetherimides, polyketones, polyphenylene oxides, polyphenylene sulfides, polyphenylsulfones, polysulfones, acetals, nylons, ABS, polyetheretherketones, phenolics, polystyrenes, polycarbonates, polyethylenes, polypropylenes, acrylics, polyurethanes, polyvinyls, polyvinylchlorides, [polymeric, plastic materials well known to those skilled in the art of thermoprotective materials] and the mixtures thereof.

46. (Amended) The flexible thermal control composite of claim 6, wherein said polymer is selected from the group of polymers consisting of latexes, fluoropolymers, expanded fluoropolymers, fluoroelastomers, elastomers polyimides, polyesters, high density polymers, polyamides, polyarylates, polyetherimides, polyketones, polyphenylene oxides, polyphenylene sulfides, polyphenylsulfones, polysulfones, acetals, nylons, ABS, polyetheretherketones, phenolics, polystyrenes, polycarbonates, polyethylenes, polypropylenes, acrylics, polyurethanes, polyvinyls, polyvinylchlorides, [polymeric, plastic materials well known to those skilled in the art of thermoprotective materials] and the mixtures thereof.

47. (Amended) The flexible thermal control composite of claim 7, wherein said polymer is selected from the group of polymers consisting of latexes, fluoropolymers, expanded fluoropolymers, fluoroelastomers, elastomers polyimides, polyesters, high density polymers, polyamides, polyarylates, polyetherimides, polyketones, polyphenylene oxides, polyphenylene sulfides, polyphenylsulfones, polysulfones, acetals, nylons, ABS, polyetheretherketones, phenolics, polystyrenes, polycarbonates, polyethylenes, polypropylenes, acrylics, polyurethanes,

polyvinyls, polyvinylchlorides, [polymeric, plastic materials well known to those skilled in the art of thermoprotective materials] and the mixtures thereof.

48. (Amended) The flexible thermal control composite of claim 8, wherein said polymer is selected from the group of polymers consisting of latexes, fluoropolymers, expanded fluoropolymers, fluoroelastomers, elastomers polyimides, polyesters, high density polymers, polyamides, polyarylates, polyetherimides, polyketones, polyphenylene oxides, polyphenylene sulfides, polyphenylsulfones, polysulfones, acetals, nylons, ABS, polyetheretherketones, phenolics, polystyrenes, polycarbonates, polyethylenes, polypropylenes, acrylics, polyurethanes, polyvinyls, polyvinylchlorides, [polymeric, plastic materials well known to those skilled in the art of thermoprotective materials] and the mixtures thereof.

49. (Amended) The flexible thermal control composite of claim 10, wherein said polymer is selected from the group of polymers consisting of latexes, fluoropolymers, expanded fluoropolymers, fluoroelastomers, elastomers polyimides, polyesters, high density polymers, polyamides, polyarylates, polyetherimides, polyketones, polyphenylene oxides, polyphenylene sulfides, polyphenylsulfones, polysulfones, acetals, nylons, ABS, polyetheretherketones, phenolics, polystyrenes, polycarbonates, polyethylenes, polypropylenes, acrylics, polyurethanes, polyvinyls, polyvinylchlorides, [polymeric, plastic materials well known to those skilled in the art of thermoprotective materials] and the mixtures thereof.

50. (Amended) The flexible thermal control composite of claim 11, wherein said polymer is selected from the group of polymers consisting of latexes, fluoropolymers, expanded fluoropolymers, fluoroelastomers, elastomers polyimides, polyesters, high density polymers, polyamides, polyarylates, polyetherimides, polyketones, polyphenylene oxides, polyphenylene



sulfides, polyphenylsulfones, polysulfones, acetals, nylons, ABS, polyetheretherketones, phenolics, polystyrenes, polycarbonates, polyethylenes, polypropylenes, acrylics, polyurethanes, polyvinyls, polyvinylchlorides, [polymeric, plastic materials well known to those skilled in the art of thermoprotective materials] and the mixtures thereof.

51. (Amended) The flexible thermal control composite of claim 12, wherein said polymer is selected from the group of polymers consisting of latexes, fluoropolymers, expanded fluoropolymers, fluoroelastomers, elastomers polyimides, polyesters, high density polymers, polyamides, polyarylates, polyetherimides, polyketones, polyphenylene oxides, polyphenylene sulfides, polyphenylsulfones, polysulfones, acetals, nylons, ABS, polyetheretherketones, phenolics, polystyrenes, polycarbonates, polyethylenes, polypropylenes, acrylics, polyurethanes, polyvinyls, polyvinylchlorides, [polymeric, plastic materials well known to those skilled in the art of thermoprotective materials] and the mixtures thereof.

52. (Amended) The flexible thermal control composite of claim 13, wherein said polymer is selected from the group of polymers consisting of latexes, fluoropolymers, expanded fluoropolymers, fluoroelastomers, elastomers polyimides, polyesters, high density polymers, polyamides, polyarylates, polyetherimides, polyketones, polyphenylene oxides, polyphenylene sulfides, polyphenylsulfones, polysulfones, acetals, nylons, ABS, polyetheretherketones, phenolics, polystyrenes, polycarbonates, polyethylenes, polypropylenes, acrylics, polyurethanes, polyvinyls, polyvinylchlorides, [polymeric, plastic materials well known to those skilled in the art of thermoprotective materials] and the mixtures thereof.

53. (Amended) The flexible thermal control composite of claim 14, wherein said polymer is selected from the group of polymers consisting of latexes, fluoropolymers, expanded

fluoropolymers, fluoroelastomers, elastomers polyimides, polyesters, high density polymers, polyamides, polyarylates, polyetherimides, polyketones, polyphenylene oxides, polyphenylene sulfides, polyphenylsulfones, polysulfones, acetals, nylons, ABS, polyetheretherketones, phenolics, polystyrenes, polycarbonates, polyethylenes, polypropylenes, acrylics, polyurethanes, polyvinyls, polyvinylchlorides, [polymeric, plastic materials well known to those skilled in the art of thermoprotective materials] and the mixtures thereof.

54. (Amended) The flexible thermal control composite of claim 15, wherein said polymer is selected from the group of polymers consisting of latexes, fluoropolymers, expanded fluoropolymers, fluoroelastomers, elastomers polyimides, polyesters, high density polymers, polyamides, polyarylates, polyetherimides, polyketones, polyphenylene oxides, polyphenylene sulfides, polyphenylsulfones, polysulfones, acetals, nylons, ABS, polyetheretherketones, phenolics, polystyrenes, polycarbonates, polyethylenes, polypropylenes, acrylics, polyurethanes, polyvinyls, polyvinylchlorides, [polymeric, plastic materials well known to those skilled in the art of thermoprotective materials] and the mixtures thereof.

55. (Amended) The flexible thermal control composite of claim 16, wherein said polymer is selected from the group of polymers consisting of latexes, fluoropolymers, expanded fluoropolymers, fluoroelastomers, elastomers polyimides, polyesters, high density polymers, polyamides, polyarylates, polyetherimides, polyketones, polyphenylene oxides, polyphenylene sulfides, polyphenylsulfones, polysulfones, acetals, nylons, ABS, polyetheretherketones, phenolics, polystyrenes, polycarbonates, polyethylenes, polypropylenes, acrylics, polyurethanes, polyvinyls, polyvinylchlorides, [polymeric, plastic materials well known to those skilled in the art of thermoprotective materials] and the mixtures thereof.

56. (Amended) The flexible thermal control composite of claim 17, wherein said polymer is selected from the group of polymers consisting of latexes, fluoropolymers, expanded fluoropolymers, fluoroelastomers, elastomers polyimides, polyesters, high density polymers, polyamides, polyarylates, polyetherimides, polyketones, polyphenylene oxides, polyphenylene sulfides, polyphenylsulfones, polysulfones, acetals, nylons, ABS, polyetheretherketones, phenolics, polystyrenes, polycarbonates, polyethylenes, polypropylenes, acrylics, polyurethanes, polyvinyls, polyvinylchlorides, [polymeric, plastic materials well known to those skilled in the art of thermoprotective materials] and the mixtures thereof.

57. (Amended) The flexible thermal control composite of claim 18, wherein said polymer is selected from the group of polymers consisting of latexes, fluoropolymers, expanded fluoropolymers, fluoroelastomers, elastomers polyimides, polyesters, high density polymers, polyamides, polyarylates, polyetherimides, polyketones, polyphenylene oxides, polyphenylene sulfides, polyphenylsulfones, polysulfones, acetals, nylons, ABS, polyetheretherketones, phenolics, polystyrenes, polycarbonates, polyethylenes, polypropylenes, acrylics, polyurethanes, polyvinyls, polyvinylchlorides, [polymeric, plastic materials well known to those skilled in the art of thermoprotective materials] and the mixtures thereof.

58. (Amended) The flexible thermal control composite of claim 19, wherein said polymer is selected from the group of polymers consisting of latexes, fluoropolymers, expanded fluoropolymers, fluoroelastomers, elastomers polyimides, polyesters, high density polymers, polyamides, polyarylates, polyetherimides, polyketones, polyphenylene oxides, polyphenylene sulfides, polyphenylsulfones, polysulfones, acetals, nylons, ABS, polyetheretherketones, phenolics, polystyrenes, polycarbonates, polyethylenes, polypropylenes, acrylics, polyurethanes,

polyvinyls, polyvinylchlorides, [polymeric, plastic materials well known to those skilled in the art of thermoprotective materials] and the mixtures thereof.

59. (Amended) The flexible thermal control composite of claim 20, wherein said polymer is selected from the group of polymers consisting of latexes, fluoropolymers, expanded fluoropolymers, fluoroelastomers, elastomers polyimides, polyesters, high density polymers, polyamides, polyarylates, polyetherimides, polyketones, polyphenylene oxides, polyphenylene sulfides, polyphenylsulfones, polysulfones, acetals, nylons, ABS, polyetheretherketones, phenolics, polystyrenes, polycarbonates, polyethylenes, polypropylenes, acrylics, polyurethanes, polyvinyls, polyvinylchlorides, [polymeric, plastic materials well known to those skilled in the art of thermoprotective materials] and the mixtures thereof.

### **REMARKS**

Reconsideration of this application as amended is requested.

Claims 1-59 are in this application. Claims 9-16 and claims 41-59 have been amended.

No new matter has been added.

I. Applicant traverses Examiner's rejection of claims 9-16, 29-36 and 41-59 under 35 U.S.C. § 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 9-16 have been amended to clearly indicate Applicant's intention to claim "oxidized homopolymers of ethylene polymer compounds." In addition, Applicant annexes hereto excerpts of publicly available information which clearly show that even though the specification may not provide a definition for the term "high molecular weight" there is sufficient information in the public domain that one of ordinary skill in the art would in fact be reasonably